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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/681.822	06/11/2001	Michael D. Sandoe	71264-6	6873

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EXAMINER

PIERCE, JEREMY R

ART UNIT	PAPER NUMBER
1771	5

DATE MAILED: 06/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/681,822

Applicant(s)

SANDOE ET AL

Examiner

Jeremy R. Pierce

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 April 2003.
- 2a) ☐ This action is FINAL.
- 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-32, 34-51 and 59-66 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-32, 34-51, 59-66 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____

- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Amendment A has been filed on April 15, 2003 as Paper No. 4. Claims 1, 33, and 52-58 have been cancelled. Claims 2, 6, 8, 10-12, 14, 16, 18, 23, 25, 26, 29, 31, 32, 34, 42, 44-46, 49, 59, 60, and 64 have been amended. New claims 65 and 66 have been added.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 2-32, 34-51, and 60-66 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 60, 65, and 66 recite the strengthening layers comprise "less fine fibers by weight than the core layer." This is indefinite because it is unclear as to what is meant by "less fine fibers by weight than the core layer." Are the fibers less fine because they have a larger denier than those in the core layer? If so, are they compared to the fine fibers, binder fibers, or other fibers? Are the "fine fibers" fewer in number in the reinforcing layer than in the core layer, but can have similar deniers? If so, would fibers that have a denier less than 0.8 not be considered fine since "fine fibers" have already been defined in the claim to be fibers having a denier between 0.8

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and 3.0. Thus, the strengthening layer could have less "fin fibers" in that it has fewer fibers with a denier between 0.8 and 3.0, but could have more fibers with a denier less than 0.8.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 2-11, 16, 17, 25-31, 34-38, 40, 42, 43, and 59-66 are rejected under 35 U.S.C. 102(e) as being anticipated by Van Kerrebrouck (U.S. Patent No. 6,066,388).

Van Kerrebrouck discloses two outer fiber layers and one inner fiber layers, both constructed of binder fibers and constructive fibers (column 2, lines 45-54). The denier of the binder fibers and constructive fibers in the outer layer is between 0.5 and 28 dtex (column 3, lines 43 and 49). The denier of the binder fibers of the inner layer is

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between 3 and 40 dtex (column 3, line 46). The denier of the constructive fibers of the inner layer is between 3 and 100 dtex (column 3, line 52). When the outer layers are constructed with 0.5 dtex fibers, they would have less "fine fibers" than the fibers of the inner layer, because fibers having a denier between 0.8 and 3.0 would be fewer. The binder fibers could act as either the claimed binder fibers or the claimed other fibers. With regard to claims 2 and 34, Van Kerrebrouck discloses using polyester, polyamide, and polyolefin (column 3, lines 58-60). With regard to claims 3, 10, and 35, Van Kerrebrouck discloses using bi-component fibers (column 5, lines 1-7). With regard to claims 6, 8, and 40, the core layer may have a basis weight of 400 grams per square meter (column 8, line 52). With regard to claims 7 and 9, the 10 mm outer layer and the 15 mm core layer would satisfy the thickness requirements of the unmolded laminate. With regard to claim 11, single-component binding fibers may be used (column 5, lines 1-7). With regard to claims 16 and 17, Van Kerrebrouck discloses impregnating the laminate with binder and adding finishing layers (column 6, lines 17-24). With regard to claim 26, the outer layers are needed to be denser than the core layer (column 8, lines 24-33). With regard to claims 27 and 61, since the needling is only done to the outer layers, and Van Kerrebrouck disclose the needling only goes 10 mm deep into a 35 mm composite (column 8, lines 30-40), one can conclude that the outer layer is thinner at 10 mm than the core layer at 15 mm. With regard to claims 28 and 59, the denser formation of the outer layers would make them less resistive. With regard to claims 29-31 and 62-64, the ranges of the dtex of the fibers in the outer layer indicate that less than 20% of the fibers could be fine and more than 25% of the core layer fibers could be

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fine (column 3, lines 42-54). With regard to claims 42 and 43, the binder fibers would act as a thermosetting resin.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 39 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Kerrebrouck.

With regard to claims 39 and 41, Van Kerrebrouck does not disclose the thickness of the core layer after molding. However, adjusting thickness of the mold is an obvious modification to a person having ordinary skill in the art because the desirability of a different thickness could be easily adjusted in the molding process. It would have been obvious to one having ordinary skill in the art to make the core layer between 0.1 and 1.3 inches thick after molding, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art.

8. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Van Kerrebrouck in view of Matsukawa et al.

Van Kerrebrouck teaches the fibers of the core layer can be 3 dtex, but does not specifically say it can be below. Matsukawa et al. disclose that increased sound absorbing performance can be achieved by using fibers with a denier of not more than 2

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(column 2, lines 1-6). It would have been obvious to one having ordinary skill in the art to include fibers with a denier of not more than 2 in the article of Van Kerrebrouck in order to improve the sound absorbing performance of the article, as taught by Matsukawa et al.

Allowable Subject Matter

9. Claims 12-15, 18-24, and 44-51 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and to correct the rejections based on 112 indefiniteness.

Response to Arguments

10. Applicant's arguments filed in Paper No. 4 have been fully considered but they are not persuasive.
11. Applicant argues that Van Kerrebrouck teach that there will be more fine fibers on the outer layers than in the inner layers, which is the exact opposite of Applicants' claims 65 and 66. However, claims 65 and 66 do not clearly recite what Applicant intends, as set forth above in the 112 and 102 rejections.
12. Applicant argues that nothing in Van Kerrebrouck teaches or suggests the thickness of the outer layers and that nothing suggests that the depth of needling is equivalent to the depth of the outer layers. Applicant states that the Examiner presumes, without basis, that the 10 mm penetration of the needling in Van Kerrebrouck

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equals the depth of the outer layers. However, Van Kerrebrouck clearly states that the needles are "adjusted to penetrate only into the outer layers of the nonwoven, in particular the penetration of the needles reaching a thickness of 10 mm" (column 8, lines 27-30). Without any teaching to the contrary, one can safely assume that the outer layers are about 10 mm thick, thus leaving the core layer at 15 mm. This assumption is not without basis, as it seems to follow straightforward reasoning based on the information given.

13. The Examiner acknowledges Applicant's argument with respect to resistivity. Although the previous Office Action did state that denser formation of the outer layers of Van Kerrebrouck would make the outer layers more resistive, this was merely a typo. It was meant to assert that the denser outer layers would be less resistive than the core layer.

14. Applicant makes various other arguments concerning dependent claims by saying that Van Kerrebrouck does not teach the claimed limitations. With regard to claims 2 and 34, Van Kerrebrouck teaches polyamide (column 3, line 59), which is nylon. With regard to claims 4, 5, 36, and 37, Van Kerrebrouck discloses binder fibers within the claimed ranges (column 3, lines 42-54). With regard to claims 6, 8, and 40, Van Kerrebrouck discloses the claimed weight ranges (column 8, line 52). With regard to claims 16 and 17, a "web" of adhesive does not define any specific structure for an adhesive layer, so impregnation of the composite with adhesive would meet the limitation.

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15. Applicant argues that it would not be obvious to modify the thickness of a molded product, and that a reference must be cited to support the assertion to the contrary. However, adjusting the thickness of a mold would be an obvious modification to a person having ordinary skill in the art. Molds are used for various purposes to fit into various sized things. A person in the art would have the knowledge to adjust the thickness of the mold in order to better size the article for application in its intended use.

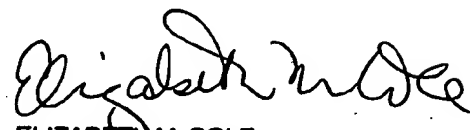
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy R. Pierce whose telephone number is (703) 605-4243. The examiner can normally be reached on Monday-Thursday 7-4:30 and alternate Fridays 7-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (703) 308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


Jeremy R. Pierce
Examiner
Art Unit 1771
June 12, 2003


ELIZABETH M. COLE
PRIMARY EXAMINER

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